



# Assessing Vermont Conservation Strategy: Safeguarding Biological Hotspots in High Priority Interior Forests

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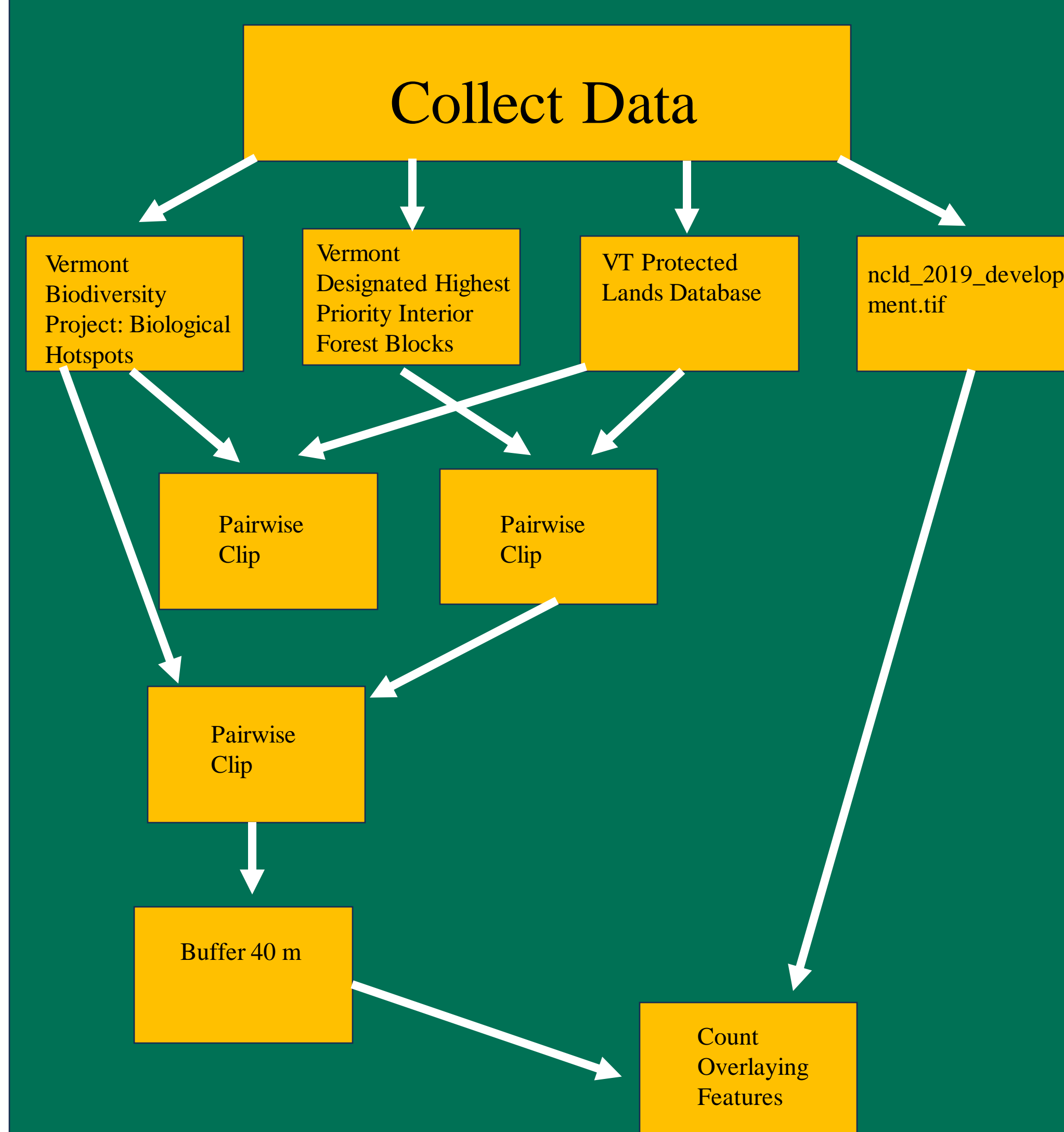
## Intro

About Seventy six percent of Vermont's landscape is forested (Department of Forests, 2020). Increasingly, this percent of forest cover is shrinking due to anthropogenic need for increased development. These forests however house valuable ecosystems and ecological hotspots that should be important considerations for conservation efforts in Vermont. For this analysis, ecological hotspots are considered areas of high biological significance or diversity and are areas needed to preserve biological integrity.

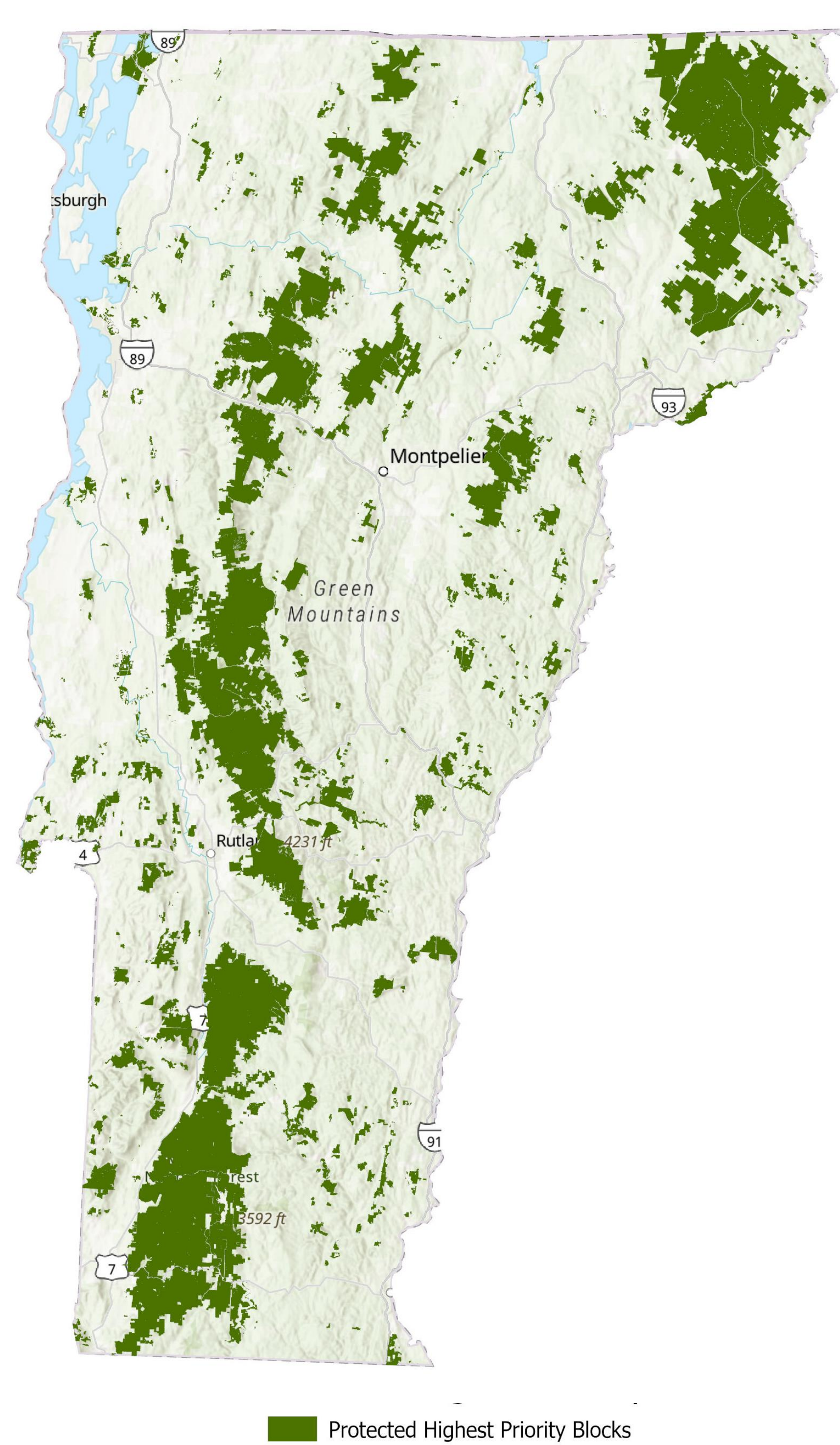
### Objectives:

1. Understand the effectiveness of current conservation efforts in Vermont in protecting high priority interior forests and the biological hotspots within them.
2. Determine the degree to which these conserved hotspots are protected from anthropogenic disturbance, defined as human impervious development.

## Methods



## Protected High Priority Interior Forests



VCGI, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA, NPS, Esri, NASA, NGA, USGS

Fig 1: Protected high priority interior forests in Vermont. Data from Vermont Geodatabase. Projection: Transverse Mercator. Coordinate System: NAD\_1983\_StatePlane\_Vermont\_FIPS\_4400.

## Biological Hotspots Protected within High Priority Interior Forests



VCGI, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA, NPS, Esri, NASA, NGA, USGS

Fig 2: Protected biological hotspots within the high priority interior forests of Vermont. Data from Vermont Geodatabase. Projection: Transverse Mercator. Coordinate System: NAD\_1983\_StatePlane\_Vermont\_FIPS\_4400.

## Results

- There were:
  - 1,033,660.4 hectares of high priority interior forests, 520,750.2 hectares of which were protected.
  - 265,156.4 hectares of biological hotspots, 227,253.6 hectares of which were protected within highest priority interior forests.
- All biological hotspots within high priority interior forests were conserved.
- All protected hotspots were within 40m of at least one area of developed land.

## Conclusion

Biological hotspots are well conserved within the high priority interior forests of Vermont however not well protected from neighboring anthropogenic disturbance. It was found that all protected hotspots are within 40m of at least one source of impervious human development, possibly leading to the disturbance of organisms inside these protected hotspots.

This analysis provides valuable information for future conservation efforts in Vermont by discovering weaknesses in the current conservation strategies. Further research should analyze the degree to which organisms within the biological hotspots are impacted by neighboring disturbance. Additionally, no biological hotspots are conserved outside of the priority interior forests. Therefore, future research should work towards determining the most effective way of preserving these biological hotspots outside of interior forests.

## Works Cited

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